

**REMARKS**

Claims 2, 3 and 9 and the pertinent portions of the specification have been amended to change “per hour” to --over time-- for consistency purposes. It is respectfully submitted that the amendment does not raise new issues that would require further consideration/search and entry thereof is respectfully requested.

The indication of allowable subject matter in claims 2-7, 9, 10, 12-18 and 20 is acknowledged and appreciated. In view of the following remarks, it is respectfully submitted that all claims are in condition for allowance.

Claims 1, 8, and 19 are independent.

Claims 1 and 8 stand rejected under 35 U.S.C. § 102 as being anticipated by Curtis et al. ‘978 (“Curtis”), and claims 1, 8 and 19 stand rejected under 35 U.S.C. § 102 as being anticipated by both Hughes et al. ‘895 (“Hughes”) and Clinkenbeard ‘527 (“Clinkenbeard”). These rejections are respectfully traversed for the following reasons.

As a preliminary matter, with respect to Curtis, the Examiner alleges that “the **change** that is measured relative to the first two absorbance values is used to calculate a volume or verify a volume when calibrating.” However, the Examiner merely concludes this allegation but does not identify precisely where Curtis allegedly discloses using a “change” in measured values to calculate the volume. In imposing a rejection under 35 U.S.C. §102, the Examiner is required to point to “page and line” wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984).

On the other hand, as set forth in the last four lines of the Abstract, Curtis expressly discloses that the “volume of the aliquot is calculated from the absorbance of the mixture and the optical pathlength of the container”, rather than any “change” of absorbance values. That is, as previously argued, Curtis discloses only mixing a reference solution and sample solution such that the measured light component *per se* is used, along with the optical pathlength, to determine the volume of the pipette.

If the Examiner maintains this rejection, it is respectfully requested that the Examiner point to the exact column and line where Curtis allegedly discloses using a *change* in absorbance values as the parameter by which to verify volume. Moreover, even assuming *arguendo* that Curtis discloses verification based on such a change, it is submitted that Curtis does not disclose verification based on a change over time for the reasons that follow.

Each of claims 1, 8 and 19 recites in pertinent part, “verifying that a predetermined amount of said sample solution is held in said sample cell ***based on a change over time in an output signal*** from said photosensor.” The Examiner has maintained the pending rejections on the allegation that the prior art disclosure of a “one-time discrete change [from sensing light to not sensing light] is sufficient to meet the limitation as presently drafted in the claim.” The Examiner supports this allegation on the further allegation that “[w]hile the sensing may be a one-time change, it is still considered as a change that occurs over time”, albeit a relatively short period of time. It is submitted that the Examiner has misinterpreted the claim language so as to improperly read the “one-time change” of the prior art onto the claimed invention. It appears that the Examiner has interpreted the claims as merely requiring that there *exist* a change over time of the output signal, rather than the verifying step necessarily being ***based on*** such a change over time of the output signal.

It is not disputed that there may exist some relatively short period of time over which the discrete change of light being sensed to light not being sensed occurs. However, the cited prior art does not rely on this short period of time in the verifying process. As emphasized above, the verification of the present invention occurs based on the *change over time* in an output signal rather than merely a *change* in an output signal. As pointed out by the Examiner, it may be true that there is a relatively short period of time from light being sensed to light not being sensed. However, the verifying step of the cited prior art is NOT based on such a change over time.

Rather, the verifying step of the cited prior art is based exclusively on the *end-result* that a discrete change has occurred and is completely independent of the transition period between light being sensed and not being sensed. Indeed, the verifying step of the cited prior art would come to the same conclusion regardless of the transition time between light being sensed and light not being sensed.

To illustrate this point, the following example is described: two systems using the one-time change of sensing light to not sensing light (e.g., Clinkenbeard and Hughes) are used for the verifying step, where one system has a time-delay circuit which delays the output signal. In this example, the two systems would sense the same change (i.e., light being sensed to light not being sensed) but would do so over two differing time periods because of the time-delay circuit in one of the systems. Nonetheless, both systems would still verify the amount of solution based on the same change (i.e., light being sensed to light not being sensed), whereby the difference in the change *over time* of the output signal would NOT affect the results of the verifying step. Accordingly, the two systems would verify that a predetermined amount of solution is held in a cell based solely on a *discrete* change in an output signal, notwithstanding that there exists a change over time of the respective signals.

Similarly, a digital signal defining a square wave with 1's and 0's may not in fact form perfectly square waves. That is, the transition line from "0" to "1" may not be perfectly perpendicular to the x-axis so as to define some change over a "relative short period of time." However, the device using the digital signal can nonetheless operate based on the end-result of the digital signal as a "0" or a "1" notwithstanding the existence of a change over time of the signal (which would lead to a "trapezoid" wave rather than a square wave).

As described at col. 5, lines 3+ of Clinkenbeard (similar operation in Hughes), "[a]t that point of time [when the light path is refracted by the water away from the sensor 30], the sensor 30 immediately sends an electronic signal to the computer ... ." Accordingly, the verifying step is based solely on the end-result of the change *per se* rather than being based on any potential "relative short period of time" over which the change occurs. Again, it is not disputed that there may exist a change over time of the output signal, but the cited prior art is completely silent as to the verifying step being **based** on such a change over time of the output signal. Rather, similar to a digital signal, the cited prior art bases the verifying step solely on the end-result of light being sensed or light not being sensed.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art device, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that neither Curtis, Hughes, nor Clinkenbeard anticipate claims 1, 8 and 19, nor any claim dependent thereon.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*,

819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1, 8 and 19 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on all the foregoing, it is submitted that claims 1-9 and 11-22 are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102 be withdrawn.

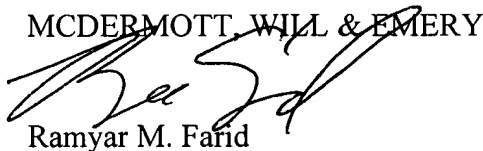
### CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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